

HSP Sampling Protocol for Lead in Drinking Water

In Delaware Schools and Childcare Facilities

Conducted Under 2017 WIIN Grant

Below is the sampling protocol to be followed by Delaware Division of Public Health, Health Systems Protection (HSP) Staff and sampling contractors for samples collected under the purview of the EPA grant awarded to the Delaware Department of Education (DOE). Approved samplers are required to have adequate water sampling background, education, and training on the EPA 3Ts sampling guidance document. This document applies to initial and follow-up sampling events.

Sampling Plan

Sampling plans need to be completed before any sampling can occur in a facility. ~~Ideally,~~ sampling plans should be completed as far in advance as possible, ideally a few days ahead to ensure adequate preparation. In the event of a short notice sampling event, the plan should be completed prior to start of sample collection. Sampling plans must include the following:

- Building or facility contact who can provide comprehensive knowledge of water entry into the building and plumbing within the building.
- Identification of all consumable points and fixtures within the building
- Utilization of building blueprints or diagrams provided by facility maintenance staff
- Sampling of fixtures beginning closest to the water entry point and working outwards as dictated by the plumbing infrastructure in each building.
- If the building is more than one floor, sampling should begin from the lowest level first and then working up each subsequent floor.

Stagnation Times

- Communicate with facility staff to ensure that sampling points are not utilized between from the time the system is flushed to the time the samples are collected. It may be useful if they place a "Do Not Use" sign on each tap.
- Instruct facility staff to conduct a system flush the day prior to sampling no earlier than noon and no later than the close of the building, 16:00 – 18:00.
- The system should sit "stagnate" for at least 8 to 16 hours before samples are collected. Samplers are to verify this with facility staff the day of sampling before any samples are collected.

Commented [JM1]: Can we provide any info on what instructions were provided for facilities to flush prior to the day of sampling?

Commented [JM2]: Did we provide an upper limit to the timeframe? Or instruct to flush and let sit overnight?

Sampling

- On the day of sampling conduct a building walkthrough with facilities personnel to ensure the sampling plan is correct and all fixtures have been identified.
- Identify the fixtures on the sampling map and give unique sample location names (i.e. Fountain by Room 123, Cafeteria Prep Sink, etc.)
- For sinks with both hot and cold knobs, use only cold water.
- Collect samples at a normal rate of speed, if water flow or pressure is too low document in the sampling plan and do not proceed with sample collection

Initial Samples

- Initial samples are to be collected at each sampling location
- Place bottle underneath tap, turn on fixture and collect all the water that comes out until ~250 mL of water is collected
- Place the tamperproof lid on the fixture and barcode on the bottle
- Place the corresponding form barcode on the sample form and fill in all the data areas
 - Facility
 - Time
 - Sampler Name
 - Sample Location
 - Sample Type
 - Additional Notes

Flush Samples

- After collection of the initial draw sample, run the fixture for 30 seconds
- With the fixture on, collect another 250 mL from the fixture
- Place the tamperproof lid on the fixture and barcode on the bottle
- Place the corresponding form barcode on the sample form and fill in all the data areas
 - Facility
 - Time
 - Sampler Name
 - Sample Location
 - Sample Type
 - Additional Notes

Chain of Custody

- Chain of custody (COC) forms are to be filled out at the completion of each sampling event.
- Each data sheet will have a barcode that matches the barcode on the bottle of the sample collected.
- Each COC will contain the following information
 - Sampling Site

- Sample ID/Barcode
- Analysis Requested
- Sample Date
- Sample Time
- Sample Description/Location
- Total Number of Containers
- Transfer of custody must be filled out each time someone knew obtains possession of the samples or when the samples are dropped off to the lab.
- Carbon copies of the COC are to be retained once samples are dropped off to the lab for retention purposes.

Formatted: Font: Bold

Approved Samplers:

- HSP Environmental Hazards and Toxicology Staff
- ODW staff
- Subcontractor - SERCAP

Formatted: Bulleted + Level: 1 + Aligned at: 0.25" +
Indent at: 0.5"

Formatted: Font: 12 pt